

CLAIMS

1. A civil engineering structure cable, comprising:
 - a set of traction reinforcements (10);
 - two devices (4, 5) for anchoring the reinforcements in two respective zones of the construction, the reinforcements being spaced apart from one another at the anchoring devices; and
 - means (11) for deviating the reinforcement to cause the reinforcements to converge toward a running part of the cable into a substantially parallel bundle which is more compact than at the anchoring devices,

characterized in that it comprises at least one guide member (30) which is in closely set contact around the set of reinforcements and which has an inner surface (32), the cross section of which is adapted to the peripheral shape of the parallel bundle and the longitudinal section of which has a convex curvature which, over the length (L) of the guide member, allows angular deflections of the reinforcements which are substantially greater than the maximum angle of convergence of the reinforcements between the anchoring device and the running part of the cable.

2. The structure cable as claimed in claim 1, wherein the angular deflections allowed by the guide member (30) are at least double the maximum angle of convergence of the reinforcements (10) between the anchoring device (4) and the running part of the cable.
3. The structure cable as claimed in claim 1, wherein the angular deflections allowed by the guide member (30) are of at least 100 milliradians.
4. The structure cable as claimed in any one of the preceding claims, wherein the radius of curvature of the longitudinal section of the inner surface (32) of the guide member (30) is at least 3 meters in the portion where this member is in closely set contact around the set of reinforcements (10).
5. The structure cable as claimed in claim 4, wherein the radius of curvature of the longitudinal section of the inner surface (32) of the guide member (30) decreases from the portion where the member is in closely set contact around the set of reinforcements (10) toward the running part of the cable.

6. The structure cable as claimed in any one of the preceding claims, wherein the guide member (30) is mounted with a capacity for transverse movement with respect to one of the anchoring devices (4).
7. The structure cable as claimed in any one of the preceding claims, further comprising means (21) for the damping of transverse vibrations of the bundle of reinforcements (10) with respect to one of the anchoring devices (4), and wherein the guide member (30) is placed on the set of reinforcements between the damping means and said anchoring device.
8. The structure cable as claimed in claim 7, wherein the guide member (30) is mounted with a limited capacity for transverse movement with respect to said anchoring device (4), so as to provide a defined stroke of the damping means (21).
9. The structure cable as claimed in claim 7 or 8, wherein the anchoring device (4) bears longitudinally against a tube (20) which is connected to the structure of a part (1) of the construction and through which the reinforcements (10) pass, wherein the damping means comprise a damper (21) arranged between the bundle of reinforcements and a support (22) mounted at that end of said tube which is opposite the anchoring device, and wherein the mounting of the support at the end of the tube is carried out by means of a connection (40) designed to break when it is subjected to a force exceeding a predefined threshold.
10. The structure cable as claimed in any one of the preceding claims, wherein the deviation means comprise a collar (11) clamped around the set of reinforcements (10) at a distance from an anchoring device (4), and wherein the guide member (30) is placed on the set of reinforcements between said collar and said anchoring device.
11. The structure cable as claimed in claim 10, wherein inserts (13) are seated, together with the reinforcements (10), in the guide member (30), so as to maintain a spacing between the reinforcements inside the guide member.
12. The structure cable as claimed in claim 11, wherein said inserts comprise plastic sleeves (13) placed individually around the reinforcements (10) inside the guide member (30).

13. The structure cable as claimed in claim 12, wherein the inner surface (32) of the guide member (30) has a hexagonal cross section.

14. The structure cable as claimed in any one of the preceding claims, wherein the guide member (30) belongs to the deviation means, at the same time contributing to causing the reinforcements (10) to converge toward the running part of the cable.

15. The structure cable as claimed in any one of the preceding claims, wherein the guide member (30) comprises a body of cast plastic resin around a metal reinforcing tube (31).

16. The structure cable as claimed in claim 15, wherein the plastic resin is a polyurethane resin.

17. A guide member for a structure cable as claimed in any one of the preceding claims, this member (30) having a tubular general shape, with an inner surface (32) to be applied in closely set contact around a set of traction reinforcements (10), the set of reinforcements converging between an anchoring device (4) and a running part of the cable where the reinforcements are gathered into a parallel bundle which is more compact than at the anchoring device, said inner surface having a cross section adapted to the peripheral shape of said bundle and a longitudinal section having a convex curvature which, over the length (L) of the guide member, allows angular deflections of the reinforcements which are substantially greater than the maximum angle of convergence of the reinforcements between the anchoring device and the running part of the cable.

18. The guide member as claimed in claim 17, wherein said allowed angular deflections are at least double the maximum angle of convergence of the reinforcements (10) between the anchoring device (4) and the running part of the cable.

19. The guide member as claimed in claim 17 or 18, wherein said allowed angular deflections are of at least 100 milliradians.

20. The guide member as claimed in any one of claims 17 to 19, wherein the radius of curvature of the longitudinal section of said inner surface (32) is at least 3 meters in the

portion where the member (30) is in closely set contact around the set of reinforcements (10).

21. The guide member as claimed in any one of claims 17 to 20, wherein the radius of curvature of the longitudinal section of said inner surface (32) decreases from the portion where the member (30) is in closely set contact around the set of reinforcements (10) toward the running part of the cable.

22. The guide member as claimed in any one of claims 17 to 21, wherein said inner surface (32) has a hexagonal or circular cross section.

23. The guide member as claimed in any one of claims 17 to 22, comprising a body of cast plastic resin around a metal reinforcing tube (31).

24. The guide member as claimed in claim 23, wherein the plastic resin is a polyurethane resin.